

PATENT CLAIMS:

1 – 14 (canceled)

15. (new) A radial tilt pad bearing assembly comprising:

an outer carrier;

a plurality of tilt pads retained within the outer carrier; and

a corresponding plurality of retaining pins to retain the tilt pads in given circumferential positions, each fixed in the bearing assembly outer carrier so as to abut a side face of a cavity in the corresponding tilt pad and at least one retaining pin and the corresponding cavity are respectively shaped such that, when in use, a clearance in a plane transverse to the axes of the bearing assembly and the tilt pad between the retaining pin and the side face is lesser at a first location which lies substantially at the inner surface of the carrier, than at all corresponding locations at radially inner portions of the side face, with respect to the first location,

wherein a contact point between the retaining pin and the tilt pad when in use, lies substantially at the inner surface of the outer carrier, and whereby the tilt pad is accordingly able to tilt without being substantially displaced circumferentially about the outer carrier.

16. (new) The radial tilt pad bearing assembly according to claim 15, wherein the retaining pin has a tapered cross-section in a plane transverse to the axes of the bearing assembly and the tilt pad.

17. (new) The radial tilt pad bearing assembly according to claim 16, wherein taper angles on both sides of the cross-section of the retaining pin are equal.

18. (new) The radial tilt pad bearing assembly according to claim 15, wherein the cavity is shaped to have a lesser dimension in a plane transverse to the axes of the bearing assembly and the tilt pad at the first location than at all corresponding locations at radially inner portions of the side face with respect to the first location.

19. (new) The radial tilt pad bearing assembly according to claim 18, wherein the cavity has a tapered cross-section in a plane transverse to the axes of the bearing assembly and the tilt pad.

20. (new) The radial tilt pad bearing assembly according to claim 19, wherein taper angles on both sides of the cross-section of the cavity are equal.

21. (new) The radial tilt pad bearing assembly according to claim 15, wherein the retaining pin and the cavity are each elongate in the axial direction of the tilt pad and the bearing assembly.

22. (new) The radial tilt pad bearing assembly according to claim 15, wherein the cavity occupies only a part of the axial extent of the tilt pad and the retaining pin has a compatible axial dimension.

23. (new) The radial tilt pad bearing assembly according to claim 15, wherein the retaining pin is pyramidal in shape.

24. (new) The radial tilt pad bearing assembly according to claim 23, wherein the pyramid has a square or rectangular base.

25. (new) The radial tilt pad bearing assembly according to claim 23, wherein the pyramid is truncated.

26. (new) The radial tilt pad bearing assembly according to claim 15, wherein the retaining pin is conical or truncated-conical in shape.

27. (new) The radial tilt pad bearing assembly according to claim 15, wherein more than one combination of cavity and pin are provided on each tilt pad aligned in the axial direction of the pad and the bearing assembly.